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November 16, 1981

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Third-quarter results less than meets the eye Page 14

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Chemical earnings post drab third quarter

Profits at major chemical firms were up only 11% over last year's very weak third quarter: gain for full year likely won't exceed 5%

William J. Storck, C&EN New York, and William F. Fallwell, C&EN Washington

U.S. chemicals had a lackluster three months in the third quarter. Although earnings at the 40 largest chemical companies increased 11% over the same period last year, they were going up against a quarter that was just beginning to recover from the short recession of 1980. At the same time, petrochemical earnings at oil companies are a drag on their parent companies and earnings at the diversified companies are mediocre at best.

In spite of what looks like a good year-to-year gain for the 40 largest chemical companies, things are not so good as they may seem. Earnings for the 40 companies, although up 11% from last year, are bucking a very weak third-quarter 1980, which itself was off 16% from 1979 third-quarter earnings. Thus, earnings at the largest chemical companies still are below 1979 third-quarter levels.

The outlook for full-year 1981, therefore, does not look strong. Through the first nine months of this year, chemical earnings increased just 7% from the same period of 1980. Since the industry will be going up against a strong 1980 fourth quarter to finish the year, it now looks as if the 40 chemical companies will be lucky to get an earnings gain of more than 5% for the full year. And if signs that the chemical economy is still slowing are correct, the industry may be fortunate to garner an increase of more than 5%.

This is a far cry from the conventional wisdom not too long ago that the second half of 1981 would be strong and that the industry would finish with a gain for the year of at least 10 to 15%. Some estimates had put the gain even higher.

The problems of the chemical industry are largely the same as they have been for some time—extremely poor construction and automotive markets. These especially affect plastics, but they also are taking their toll on many other chemical products. As a result of the poor end-use demand, capacity use in many areas of the chemical industry is in poor shape and prices are weak.

The one bright spot seems to be fibers, but even here the performance is erratic. Those fibers that go into

Chemical industry leaders for third-quarter 1981 . . .

Sales			Earnings[a]			Profitability		
Rank	$ Millions	Rank 1980		$ Millions	Rank 1980		Earnings as % of sales	Rank 1980
1 Du Pont	$ 3671.0	1	Du Pont	$134.0	3	Freeport-McMoRan	21.8%	1
2 Dow Chemical	2923.9	2	Union Carbide	137.8	2	Nalco Chemical	12.6	5
3 Union Carbide	2424.7	3	Dow Chemical	108.5	1	Great Lakes Chemical	10.8	3
4 Monsanto	1633.8	4	W. R. Grace	97.1	4	International Flavors	10.1	2
5 W. R. Grace	1587.6	5	Allied Corp.	80.0	5	International Minerals	8.9	7
6 Allied Corp.	1544.0	6	Monsanto	55.9	11	Chemed	8.6	8
7 Celanese	955.0	8	Diamond Shamrock	51.8	8	Mallinckrodt	7.5	9
8 American Cyanamid	868.0	7	PPG Industries	49.7	7	Petrolite	7.5	6
9 PPG Industries	847.5	9	Freeport-McMoRan	44.3	6	Loctite	7.2	22
10 Diamond Shamrock	823.4	11	American Cyanamid	42.0	10	Air Products	7.1	15

. . . and for first nine months 1981

Sales			Earnings[a]			Profitability		
Rank	$ Millions	Rank 1980		$ Millions	Rank 1980		Earnings as % of sales	Rank 1980
1 Du Pont	$11,277.0	1	Du Pont	$609.0	3	Freeport McMoRan	21.0%	1
2 Dow Chemical	8,887.7	2	Union Carbide	509.2	2	Great Lakes Chemical	13.1	3
3 Union Carbide	7,739.2	3	Dow Chemical	418.4	1	Nalco Chemical	12.2	5
4 Monsanto	5,389.4	4	Monsanto	325.7	5	International Flavors	11.7	2
5 W. R. Grace	4,761.5	5	W. R. Grace	279.6	4	Stauffer Chemical	9.3	13
6 Allied Corp.	4,711.0	6	Allied Corp.	251.0	6	Petrolite	9.1	6
7 Celanese	2,868.0	8	PPG Industries	166.2	8	Chemed	9.0	8
8 PPG Industries	2,550.0	9	Diamond Shamrock	163.5	7	Mallinckrodt	8.0	11
9 Diamond Shamrock	2,523.3	11	Freeport McMoRan	133.3	9	Air Products	7.8	12
10 American Cyanamid	2513.7	7	American Cyanamid	131.3	11	Lubrizol	7.8	4

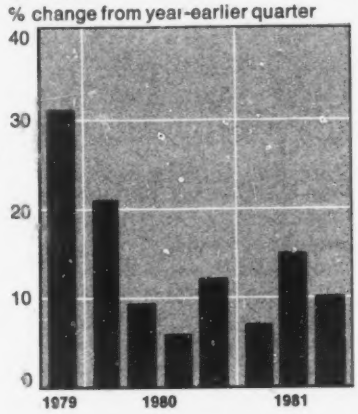
a After taxes. Note: For 40 chemical companies listed on page 16.

Chemical Industry Third-Quarter Results

- Sales increased 10%
- Earnings rose 11%
- Causing flat profit margins
- Production increased 11%
- As did prices

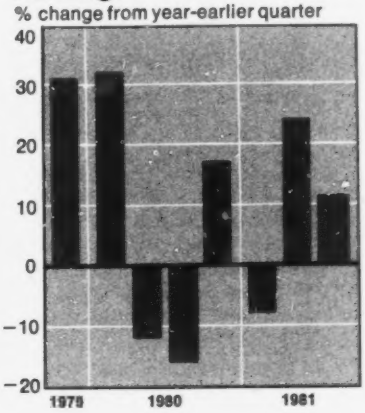
Sales

% change from year-earlier quarter



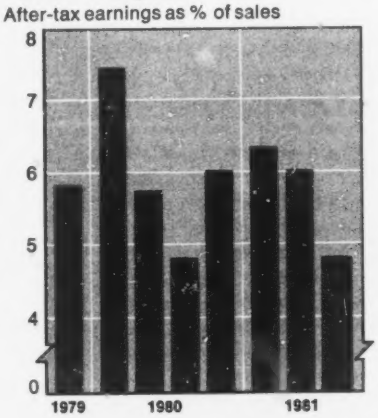
Earnings

% change from year-earlier quarter



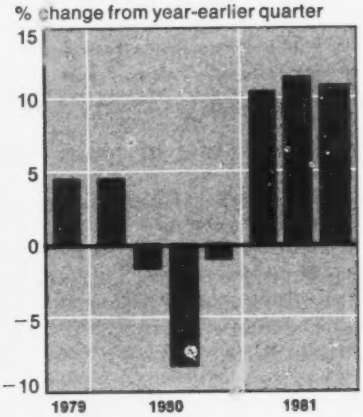
Profit margins

After-tax earnings as % of sales



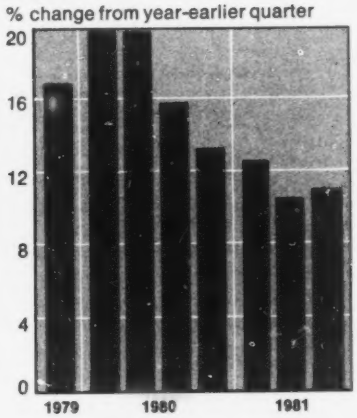
Production

% change from year-earlier quarter



Prices

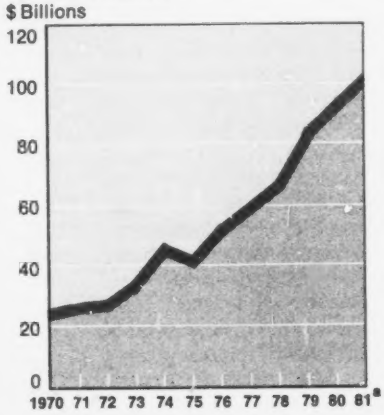
% change from year-earlier quarter



1981 earnings now will be up only 5%; sales likely will increase 10% to more than $100 billion, driving average profit margin down to 5.7%

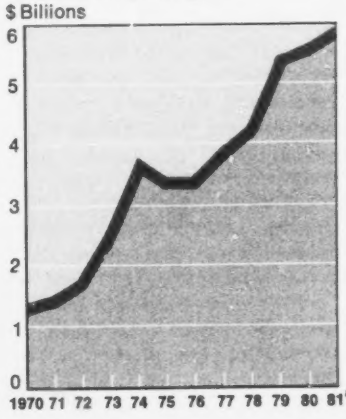
Annual sales

$ Billions



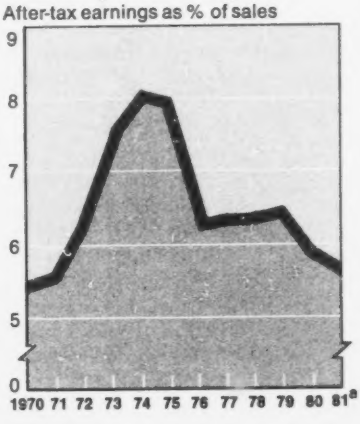
Annual earnings

$ Billions



Annual profit margins

After-tax earnings as % of sales



a C&EN estimates. **Note:** All sales, earnings, and profit margin data are based on the combined performance of the 40 largest chemical makers listed on page 16.

Third-quarter profit margins at chemical companies stayed at last year's low level

	THIRD-QUARTER 1981						NINE-MONTHS 1981			
	Sales	Earnings	Change from 1980		Profit margin[a]		Sales	Earnings	Change from 1980	
	($ millions)		Sales	Earnings	1981	1980	($ millions)		Sales	Earnings
Du Pont[d]	$ 3,671.0	$ 164.0	15%	91%	4.5%	2.7%	$11,277.0	$ 609.0	10%	21%
Dow Chemical	2,923.9	106.5	16	−32	3.7	6.4	8,887.7	418.4	13	−26
Union Carbide[e]	2,424.7	137.8	2	−10	5.7	6.5	7,739.2	509.2	6	−3
Monsanto[f]	1,633.8	55.9	6	89	3.4	1.9	5,389.4	325.7	10	5
W. R. Grace	1,587.6	97.1	6	41	6.1	4.6	4,761.5	279.6	8	28
Allied Corp.[g]	1,544.0	80.0	17	21	5.2	5.0	4,711.0	251.0	16	21
Celanese	955.0	34.0	22	55	3.6	2.8	2,868.0	111.0	18	34
American Cyanamid[h]	868.0	42.0	9	4	4.8	5.0	2,513.7	131.3	7	19
PPG Industries	847.5	49.7	11	4	5.9	6.2	2,550.0	166.2	10	17
Diamond Shamrock	823.4	51.8	6	4	6.3	6.4	2,523.3	163.5	10	3
B. F. Goodrich[i]	822.2	13.7	5	57	1.7	1.1	2,431.1	42.6	6	9
Hercules	690.0	27.0	19	21	3.9	3.8	2,070.0	96.1	12	16
Olin	489.9	17.7	13	46	3.6	2.8	1,556.0	79.1	11	29
Williams Cos.	478.6	13.9	−8	−45	2.9	4.8	1,552.4	103.4	−1	−3
International Minerals	448.3	39.9	3	−1	8.9	9.3	1,531.9	116.7	10	−8
Ethyl Corp.	448.2	21.0	4	9	4.7	4.5	1,326.9	65.1	1	nc
Rohm & Haas[j]	448.0	21.6	11	−4	4.8	5.6	1,472.1	73.9	13	−4
Air Products	403.0	28.8	9	24	7.1	6.3	1,203.6	93.7	9	11
Stauffer Chemical	343.3	14.3	4	218	4.2	1.4	1,349.8	125.3	6	33
Witco Chemical[k]	326.1	9.6	9	4	2.9	3.1	985.1	25.8	14	−16
Akzona	288.2	5.0	21	def	1.7	def	911.1	12.5	18	346
Pennwalt	287.5	9.1	nc	nc	3.2	3.2	891.1	29.5	3	−6
Reichhold Chemicals[l]	246.1	3.2	15	−32	1.3	2.2	739.2	12.7	11	40
Lubrizol	225.9	14.9	1	−47	6.6	12.6	690.9	54.0	nc	−38
Freeport-McMoRan	202.8	44.3	6	−11	21.8	26.0	635.7	133.3	24	−2
Thiokol	178.9	9.2	9	42	5.1	4.0	529.0	26.2	15	12
Nalco Chemical	168.1	21.1	7	15	12.6	11.8	489.0	59.9	8	15
Mallinckrodt	122.0	9.2	14	11	7.5	7.7	370.7	29.5	13	12
International Flavors	109.5	11.1	2	−28	10.1	14.4	353.2	41.3	nc	−21
Liquid Air[m]	104.9	6.8	8	5	6.5	6.7	323.5	23.2	5	10
Chemed[n]	90.6	7.8	14	21	8.6	8.1	263.3	23.6	15	17
H. B. Fuller	83.5	3.8	13	98	4.5	2.6	246.3	10.4	13	65
Petrolite	74.3	5.6	13	−19	7.5	10.5	220.1	20.1	16	6
Crompton & Knowles	60.8	1.7	5	42	2.8	2.1	186.8	5.9	3	16
Loctite	54.5	3.9	12	50	7.2	4.7	166.8	9.5	10	−26
First Mississippi	53.2	—	−8	−99	—	6.6	254.5	17.5	31	2
Stepan Chemical[n]	50.1	1.4	27	−33	2.8	5.3	155.6	4.5	34	8
Essex Chemical[c]	40.9	2.3	−3	35	5.6	4.0	132.8	5.7	18	50
Great Lakes Chemical	40.8	4.4	29	1	10.8	13.6	110.1	14.4	20	6
Philip A. Hunt	27.5	1.5	7	36	5.5	4.3	82.2	2.8	3	−38
Total 20 largest companies	**$22,176.5**	**$1028.3**	**13%**	**10%**	**4.6%**	**4.5%**	**$68,699.3**	**$3786.6**	**10%**	**8%**
Total 20 other companies	**$ 2,510.1**	**$ 166.3**	**9%**	**−4%**	**6.6%**	**7.5%**	**$ 7,751.9**	**$ 536.5**	**11%**	**−2%**
GRAND TOTAL	**$24,686.6**	**$1194.6**	**10%**	**11%**	**4.8%**	**4.8%**	**$76,451.2**	**$4323.1**	**10%**	**7%**

a After-tax income as a percentage of sales. b Fully diluted before nonrecurring items and extraordinary charges for operations. c As of Oct. 30. d Excludes Conoco results for third quarter. e Excludes $217.3 million nonrecurring credit in first nine months 1980. f Excludes $67.7 million nonrecurring gain in third-quarter 1981. g Excludes net nonrecurring gain of $38 million in third-quarter 1981. h Includes nonrecurring change in 1980. i Excludes $8.7 million nonrecurring gain in third quarter. j Includes nonrecurring item. k Excludes $1.6 million nonrecurring

construction markets such as carpet nylon and polyester are having a tough go of it. Apparel fibers are doing a little better. The theory is that because people cannot buy the really big ticket items such as automobiles they will content themselves with clothing.

Add to the problems of construction and automobiles, the poor overseas economy, and the strengthening U.S. dollar against other currencies and it is easy to see why the chemical economy is in the shape that it is. And the problems plaguing the industry do not seem likely to go away soon. It is a good bet that the U.S. chemical economy will not begin a recovery until at least the second quarter of next year—about nine months after the time that was originally estimated for a turnaround.

Even then, the growth probably will not be spectacular. And, not until 1983 will U.S. chemicals begin to see performance matching that of a few years ago.

The 11% gain in the third quarter brought earnings for the 40 companies up to $1.19 billion. At the same

NINE-MONTHS 1981		12-MONTH RUNNING DATA				STOCK MARKET DATA[c]							
Profit margin[a]		Change from 1980		Profit margin[a]		Earnings per share[b]		Stock price			Price earnings ratio Oct. 30	Annual indicated dividend	Dividend yield, % of price
							Recent		Recent 12 months				
1981	1980	Sales	Earnings	1981	1980	3rd qtr	12 months	Oct. 30	High	Low			
5.4%	4.9%	11%	37%	5.6%	4.6%	na	na	$40½	$56	$35¾	na	$2.40	5.9%
4.7	7.2	6	−18	5.6	7.3	$0.57	$ 3.16	25⅞	39	23⅜	8	1.80	7.0
6.6	7.2	7	−3	6.1	6.7	2.02	10.15	47¾	62⅛	44⅞	5	3.40	7.1
6.0	4.4	9	55	5.2	3.6	1.34	9.51	63½	87½	55¾	7	3.80	6.0
5.9	5.0	10	23	5.4	4.8	2.00	7.17	45½	63½	38½	6	2.60	5.7
5.3	5.1	15	26	5.6	5.1	2.35	9.79	47½	61¾	39	5	2.40	5.1
3.9	3.4	16	38	4.0	3.4	2.01	9.33	56⅝	69¼	48⅝	6	4.00	7.1
5.2	4.7	5	9	5.0	4.9	0.88	3.75	26	36½	24½	7	1.75	6.5
6.5	6.1	9	18	6.9	6.3	1.47	6.97	38¼	58¼	32¾	5	2.36	6.2
6.5	6.9	12	−6	6.1	7.2	0.83	3.50	28	39⅝	23¾	8	1.76	6.3
1.8	1.7	4	34	2.0	1.6	0.67	4.41	19¾	28⅛	18⅞	4	1.56	7.9
4.6	4.5	10	10	4.7	4.7	0.62	2.89	20½	26⅜	18	7	1.32	6.4
5.1	4.4	11	19	4.5	4.2	0.74	3.81	23	27	17½	6	1.20	5.2
6.7	6.8	1	−6	6.4	6.8	0.46	4.62	26½	49⅞	22¼	6	1.20	4.5
7.6	9.1	10	−1	8.0	9.0	1.46	5.96	34	66½	31⅜	6	2.60	7.6
4.9	5.0	1	3	5.1	5.0	1.05	4.47	23½	34½	21⅞	5	1.50	6.4
5.0	5.9	12	5	5.3	5.6	1.67	8.24	59	71¾	45¾	7	2.80	4.7
7.8	7.6	11	9	8.0	8.1	1.01	4.42	39¼	53¼	34	9	0.80	2.0
9.3	7.4	8	18	8.6	7.9	0.33	3.48	19⅜	27¾	17⅞	6	1.32	6.8
2.6	3.6	15	−11	2.8	3.6	1.02	3.76	25	33¾	23½	7	1.80	7.2
1.4	0.4	12	51	1.2	0.9	0.40	1.18	10⅝	15½	9¼	9	0.80	7.5
3.3	3.6	2	−6	3.5	3.8	0.88	3.92	29⅛	36	25¾	7	2.20	7.6
1.7	1.4	8	70	2.1	1.3	0.36	2.43	12⅜	16	11⅛	5	0.48	3.9
7.8	12.6	4	−29	8.5	12.4	0.39	3.14	21⅜	38⅞	20⅜	7	1.08	5.1
21.0	26.5	32	36	21.5	20.9	0.64	3.15	24⅝	40½	21¼	8	0.60	2.4
5.0	5.1	12	−1	4.9	5.5	0.79	2.90	30¼	39	26½	10	1.10	3.6
12.2	11.5	6	16	12.3	11.2	1.05	3.97	50	58¼	41	13	2.00	4.0
8.0	8.0	13	11	8.1	8.2	0.61	3.29	36½	41⅝	28¼	11	1.00	2.7
11.7	14.9	1	−20	11.6	14.6	0.30	1.87	20⅜	23¼	17⅞	13	1.00	4.9
7.2	6.9	10	5	6.7	7.1	0.76	2.44	17½	31¾	17¼	7	1.60	9.1
9.0	8.8	14	15	8.8	8.8	0.39	2.76	43¼	50¼	36¾	16	2.28	5.3
4.2	2.9	9	72	4.4	2.8	0.82	3.04	25¾	26	11½	8	0.48	1.9
9.1	10.0	18	11	9.1	9.8	0.47	3.28	29	44¾	25¼	9	0.80	2.8
3.2	2.8	2	−2	3.2	3.3	0.48	2.87	15⅝	18¾	11¾	5	0.96	6.1
5.7	8.5	10	−27	6.3	8.4	0.40	1.40	23	33½	18⅛	16	0.56	2.4
6.9	8.8	38	15	7.3	8.8	—	1.21	14⅜	30¾	13⅛	12	0.24	1.7
2.9	3.5	29	115	2.9	1.8	0.76	3.07	37¾	43¾	19	12	1.00	2.6
4.3	3.4	18	121	4.8	2.6	0.20	2.13	17½	20¼	12½	8	0.80	4.6
13.1	14.8	16	7	13.7	14.8	0.60	2.76	43¾	58½	36¼	16	0.48	1.1
3.4	5.6	2	def	def	3.0	0.27	0.42	9½	12⅛	8⅜	23	0.40	4.2
5.5%	5.6%	9%	7%	5.4%	5.5%								
6.9%	7.8%	11%	6%	7.0%	7.3%								
5.7%	5.8%	9%	7%	5.5%	5.6%								

gain in third-quarter 1981. l Excludes $2.4 million charge in nine-months 1981. m Excludes $2 million gain in nine-months 1980. n Excludes $4.5 million gain in third-quarter 1981 and $800,000 gain in third-quarter 1980; nonoperating gain in nine-months 1981 totaled $5.3 million and in nine-months 1980, $2.2 million. o Excludes $900,000 nonrecurring gain in nine-months 1981. **na** = not applicable. **def** = deficit.

time sales increased an almost equal 10% to $24.7 billion from the third quarter last year. Thus, profit margins (earnings as a percentage of sales) stayed the same at a depressed 4.8%. This is a far cry from the 7.4% that the companies achieved in the first quarter of 1980 or even the 6.3% and 6.0% they made in the first and second quarters of 1981. The last good third quarter was in 1979 when the 40 chemical companies had an average profit margin of 6.1%.

Earnings in the third quarter this year were as good as they were because of some large gains among the bigger chemical companies. For instance, Du Pont, even without including the results of the Conoco acquisition for the two months—August and September—that they were merged, had an earnings increase of 91%. Monsanto's earnings were up 89% from a year ago, B. F. Goodrich increased 57%, and Celanese had an increase of 55%. The biggest gain was at Stauffer Chemical, where earnings increased 218% in the third quarter from the same period of 1980.

These gains more than offset the

Earnings begin to drop at some chemical-producing oil companies

	% chemical sales	THIRD-QUARTER 1981 Sales ($ millions)	Earnings ($ millions)	Change from 1980 Sales	Change from 1980 Earnings	Profit margin[a] 1981	Profit margin[a] 1980	NINE-MONTHS 1981 Sales ($ millions)	Earnings ($ millions)	Change from 1980 Sales
Exxon	7%	$27,614.0	$1075.0	3%	−21%	3.9%	5.1%	$85,406.0	$4500.0	6%
Mobil[b]	3	16,845.0	506.0	8	−30	3.0	4.6	50,549.0	1846.0	9
Texaco[b]	3	14,472.8	589.7	15	−7	4.1	5.0	44,731.9	1803.4	16
Standard Oil of California	3	11,458.0	527.0	10	−16	4.6	5.9	34,425.0	1809.0	9
Standard Oil (Ind.)[b]	9	7,956.7	528.3	23	18	6.6	6.9	23,949.0	1457.8	19
Gulf Oil[b]	10	7,430.0	316.0	12	30	4.3	3.7	22,504.0	930.0	6
Atlantic Richfield[b]	8	6,967.6	433.5	24	58	6.2	4.9	21,068.0	1201.5	26
Shell Oil	16	5,578.0	471.0	9	33	8.4	6.9	16,545.0	1242.0	12
Phillips Petroleum	14	3,900.0	192.3	21	−32	4.9	8.8	12,200.0	692.8	24
Occidental Petroleum[c]	16	3,730.7	115.8	26	−13	3.1	4.5	10,238.2	456.4	10
Sun Co.[b]	3	3,700.0	210.0	23	8	5.7	6.5	11,600.0	493.0	27
Tenneco	12	3,585.0	156.0	17	−4	4.4	5.3	11,170.0	553.0	17
Getty Oil	2	3,267.6	205.2	28	7	6.3	7.5	9,778.7	640.4	31
Standard Oil (Ohio)	4	3,010.8	470.0	18	8	15.6	17.0	9,038.0	1470.0	12
Union Oil[b]	10	2,872.0	168.6	9	38	5.9	4.6	8,314.0	531.0	7
Cities Service	7	2,144.7	77.6	28	−16	3.6	5.5	6,709.0	225.8	17
El Paso	14	1,061.0	39.2	21	54	3.7	2.9	3,069.0	107.8	17
Kerr-McGee	14	946.8	50.3	6	49	5.3	3.8	2,753.7	145.1	9
Internorth	12	741.6	28.3	26	93	3.8	2.5	2,622.2	185.2	23
American Petrofina	15	601.5	21.7	29	−24	3.6	6.1	1,981.7	57.2	33

a After-tax income as percentage of sales. b Excludes major nonrecurring earnings: Mobil—$459 million in first-quarter 1980; Texaco—$402 million in first-quarter 1980; Standard Oil (Ind.)—$80 million in third-quarter 1981; Gulf Oil—$100 million in first nine months 1980; Atlantic Richfield—$115 million in third-quarter 1980; Sun Co.—$135 million in second-quarter 1981; Union Oil—$24.4 million in second-quarter 1981. c Includes major nonrecurring earnings.

Petrochemical earnings still trail the pack

The largest part of the commercial chemical world outside basic chemical companies continues to show a fitful profits recovery. Like their basic chemical cousins, the petrochemical parts of oil and natural gas companies have reported a great range in year-to-year comparisons for the third quarter. Some improved considerably, but others slumped even more. Overall, petrochemical earnings hold to their traditional lagging, magnified version of the overall chemical earnings pace.

For five major U.S. oil companies supplying after-tax data (Conoco having departed from the group to join Du Pont), petrochemical earnings slipped 2% in the third quarter from a year ago. That's better than the 18% drop in the second quarter and 55% sag in the first. But it's nothing to cheer about, since third-quarter 1980 was poor enough to offer an easy chance for improvement.

So for the first nine months of 1981, petrochemical earnings are still down 27% from the same period in 1980.

Some rays of hope light up a few corners in oil and gas companies' reports on the third quarter for petrochemicals, but not many. Although the largest petrochemical producer, Exxon, managed to increase earnings from a year ago, chairman Clifton C. Garvin Jr. treats the turnaround very coolly: "Chemical earnings showed a marginal improvement over the very depressed third quarter last year." For the nine-months results, still down from 1980, Garvin explains that physical sales volumes declined 3% worldwide. Profit margins abroad were squeezed by excess plant capacity and rising costs, particularly in Europe.

Mobil also pointed to troubled European profit margins for both petrochemicals and plastics. Mobil adds that its U.S. petrochemical profit margins also fell from last year. As a result, the company had even lower profits this year than last in both the third quarter and first nine months.

Worst off among the group of five was Shell Oil with a third-quarter profits drop of 58%. President John F. Bookout Jr. says, "Higher sales volumes and prices generally offset increased variable costs, but were not sufficient to cover higher fixed costs associated with the startup and underutilization of facilities."

Standard Oil (Ind.) had higher chemical earnings in the third quarter than a year ago but chooses to look at the dark side in its commentary. Chairman John E. Swearingen says that, over the first nine months, although price increases generally have kept pace with raw material cost increases (the main variable type of cost), demand in several product lines has weakened.

	AFTER-TAX EARNINGS Third quarter			Nine months		
$ Millions	1981	1980	% change	1981	1980	% change
Exxon	$65.0	$58.0	12%	$222.0	$327.9	−32%
Mobil	17.0	21.0	−19	70.0	83.0	−16
Shell Oil	14.0	33.0	−58	35.0	110.0	−68
Standard Oil (Ind.)	19.3	10.5	84	110.4	115.8	−5
Texaco	12.9	8.4	53	61.6	47.6	29
TOTAL	$128.2	$130.9	−2%	$499.0	$684.3	−27%

NINE-MONTHS 1981			STOCK MARKET DATA							
Change from 1980	Profit margin[a]		Earnings per share		Stock price			Price-earnings ratio	Annual indicated	Dividend yield, %
Earnings	1981	1980	3rd qtr	Recent 12 months	Oct. 30	Recent 12 months High	Recent 12 months Low	Oct. 30	dividend	of price
4%	5.3%	5.4%	$1.25	$6.77	$30 3/8	$44 3/8	$29 1/2	4	$3.00	9.9%
−18	3.7	4.9	1.19	5.67	26	44 1/4	24 1/8	5	2.00	7.7
4	4.0	4.5	2.25	8.65	32 1/2	54 3/8	31 1/2	4	3.00	9.2
1	5.3	5.7	1.54	7.09	42 3/4	51 3/4	35 1/8	6	2.40	5.6
−4	6.1	7.5	1.81	6.38	50 1/2	99 1/2	47 1/4	8	2.60	5.1
−7	4.1	4.7	1.63	6.33	35 7/8	52 3/4	30 5/8	6	2.80	7.8
6	5.7	6.8	1.73	6.40	48 1/8	74 3/8	38 1/4	8	2.20	4.6
10	7.5	7.6	1.52	5.34	43 3/4	65 1/2	38 1/4	8	1.80	4.1
−11	5.7	8.0	1.86	6.44	41 1/4	62 7/8	34 1/4	6	2.20	5.3
−20	4.5	6.2	1.13	6.57	24 3/4	39 1/8	21 5/8	4	2.50	10.1
−29	4.3	7.6	1.68	4.64	39 1/4	59 5/8	29	8	2.10	5.4
5	5.0	5.5	1.09	5.66	31 3/8	58 3/8	30 3/4	6	2.60	8.3
−3	6.6	8.9	2.50	10.36	63 1/4	108 1/4	55 1/4	6	2.40	3.8
10	16.3	16.6	1.92	7.91	43 3/8	91 1/2	36 1/8	5	2.40	5.5
13	6.4	6.1	0.66	4.08	40 1/8	56 1/2	28 1/4	10	1.00	2.5
−39	3.4	6.5	0.94	4.01	48 3/4	69 1/8	35 1/4	12	1.60	3.3
38	3.5	3.0	0.82	2.90	25	29 1/2	19 1/4	9	1.48	5.9
11	5.3	5.2	1.94	7.58	74 1/2	93	61 1/2	10	2.00	2.7
9	7.1	7.9	0.63	5.07	28 1/4	49 3/4	27 1/2	6	2.12	7.5
−33	2.9	5.7	2.01	7.10	56 1/8	71 7/8	41	8	3.20	5.7

drops among the big companies of 32% at Dow, 10% at Union Carbide, and 45% at Williams Cos.

Among the 20 smaller companies on the list, there were no really big gains, except for a 98% increase at H. B. Fuller. However, there were some huge drops such as the 99% decrease at First Mississippi that all but wiped out earnings for the quarter.

As a result, in terms of average earnings gain, the 20 largest companies by far outperformed the smaller, more specialty-oriented companies on the list. At the 20 largest companies, total earnings were $1.03 billion, a 13% increase from earnings in the third quarter last year.

At the same time earnings were falling at the 20 smaller companies. For this group, earnings in the third quarter were $166 million, down 4% from the third quarter of 1980.

Sales at the larger companies and at the smaller increased almost the same in the third quarter. Sales for the 20 largest increased 10% to $22.2 billion from last year, whereas sales at the smaller companies went up 9% to $2.5 billion from third-quarter 1980.

As a result, the average profit margin for the group of larger companies rose slightly, whereas that at the group of smaller companies, though still higher than at the larger companies, fell dramatically. The average profit margin at the larger companies increased to 4.6% in the third quarter this year from 4.5% in the same period a year ago. At the 20 smaller firms, the average profit margin fell to 6.6% from 7.5% in the third quarter of 1980.

The first nine months, in many ways, resembles the third quarter. Earnings for the 40 companies increased 7% to $4.3 billion from the same nine months last year. Sales at the same time were increasing 10% to $76.5 billion. Profit margins for the companies, therefore, decreased slightly to an average of 5.7% from the 5.8% recorded in the first nine months last year.

As in the third quarter, earnings gains in the first three quarters were higher at the larger than at the smaller companies. Earnings at the 20 larger companies, again led by gains at a few big firms, increased 8% to about $3.79 billion from the year before.

At the smaller companies, earnings through the first three quarters declined 2% to $537 million from the first nine months of 1980.

Again, as in the third quarter, the sales increases for the two groups were within one percentage point of each other, but this time the smaller firms are on top. Sales for the 20 larger companies averaged a 10% increase to about $68.7 billion from the first nine months last year. The average increase for the group of smaller companies was 11% to a total of $7.75 billion from last year.

But, unlike the third quarter, profit margins in the nine months declined for both groups. The average profit margin for the 20 bigger firms declined to 5.5% in the first nine months of this year from 5.6% in the same period a year ago. At the group of smaller companies, profitability remained higher than that for the larger group, but still dropped to 6.9% from 7.8% in the first nine months last year.

Outside the 40 companies in the basic C&EN survey, third-quarter chemical results covered a dizzy range, from dramatically improved to considerably worse off. At most of these diversified producers, however, chemicals were not much involved in overall financial gains.

There were exceptions of course. For example, FMC, Vulcan Materials, Engelhard, NL Industries, and Kaiser Aluminum credit chemi-

Earnings tumble at many diversified chemical producers

	% chemical sales	THIRD-QUARTER 1981 Sales ($ millions)	Earnings ($ millions)	Change from 1980 Sales	Change from 1980 Earnings	Profit margin[a] 1981	Profit margin[a] 1980	NINE-MONTHS 1981 Sales[a] ($ millions)	Earnings ($ millions)	Change from 1980 Sales
General Electric	4%	$6640.0	$405.0	11%	13%	6.1%	6.0%	$19,680.0	$1200.0	9%
U.S. Steel[b]	12	3465.8	187.8	26	377	5.4	1.4	10,657.2	570.8	17
Dart & Kraft[c]	11	2565.4	80.5	7	−4	3.1	3.5	7,575.7	293.1	9
Eastman Kodak	23	2542.1	334.0	8	6	13.1	13.4	7,264.8	867.6	10
Goodyear Tire & Rubber	12	2312.2	38.2	8	−34	1.7	2.7	6,901.8	149.5	11
3M	15	1684.0	124.4	8	−31	7.4	11.5	4,930.0	402.1	8
Georgia-Pacific	13	1401.0	31.0	10	−58	2.2	5.8	4,192.0	138.0	13
Aluminum Co. of America[b]	10	1284.3	71.8	2	−4	5.6	5.9	3,888.0	254.4	1
Borden	34	1090.3	45.2	−5	4	4.2	3.8	3,351.8	117.5	−4
Northwest Industries[c]	4	977.8	72.4	38	88	7.4	5.4	2,714.7	191.1	32
Esmark	26	884.2	36.8	13	91	4.2	2.5	2,466.1	100.4	16
FMC	35	843.9	31.3	10	45	3.7	2.8	2,492.5	107.4	5
Martin Marietta	10	835.9	60.6	20	18	7.3	7.4	2,438.6	161.4	28
Pfizer	14	819.1	58.3	8	−13	7.1	8.9	2,427.2	197.8	10
Kaiser Aluminum	13	780.0	12.3	−5	−75	1.6	5.9	2,508.0	148.9	−5
NL Industries	26	715.1	85.4	38	102	11.9	8.2	2,008.0	220.4	31
Merck	16	699.5	85.9	1	−21	12.3	15.7	2,169.1	306.2	7
Borg-Warner	24	681.8	42.7	10	104	6.3	3.4	2,070.1	119.3	5
General Tire[b]	19	652.9	31.1	24	138	4.8	2.5	1,879.6	49.1	20
Eli Lilly	20	623.8	79.0	4	5	12.7	12.5	2,061.0	280.5	7
Koppers[c]	30	540.9	25.2	−3	10	4.7	4.1	1,505.1	37.6	6
Uniroyal[c]	27	533.8	8.4	1	500	1.6	0.3	1,701.7	38.7	0
Engelhard[b]	7	509.4	17.8	−32	2	3.5	2.3	1,647.7	53.5	−31
National Distillers[b]	36	480.1	29.6	6	63	6.2	4.0	1,511.0	98.4	0
Upjohn	19	447.7	31.2	3	−20	6.9	9.1	1,443.1	123.4	10
Emhart	16	401.6	19.8	−2	78	4.9	2.7	1,278.0	41.2	−3
Vulcan Materials	38	213.1	24.1	9	21	11.3	10.2	586.3	61.3	6
Big Three Industries	30	210.0	26.7	23	21	12.7	12.9	608.7	79.1	27
GAF	41	177.5	−5.1	−3	d	d	2.3	528.3	2.3	5
Ferro	15	171.6	2.9	−2	−68	1.7	5.2	540.0	12.5	5

a After-tax earnings as percentage of sales. b Excludes major nonrecurring earnings: U.S. Steel—$349 million in third-quarter 1981, $405 million in first nine months 1981, and $37.6 million in third-quarter 1980; Aluminum Co. of America—$9.5 million in third-quarter 1981 and $27.3 million in first nine months 1980; General Tire—$4.4 million charge in first-quarter 1981; Engelhard—$5.2 million in second-quarter 1981; National Distillers—$19.2 million charge in third-quarter 1980. c Includes nonrecurring earnings. d Deficit. na = not applicable.

cals with a major positive influence on overall corporate earnings. Special situations helped, such as FMC's reinvigorated pyrethroid insecticides, Vulcan Materials' fortunate position in booming caustic soda, NL Industries' improved titanium dioxide markets, and Engelhard's record-setting pace in cracking catalysts.

However, at several companies with vastly improved overall operations, chemicals have not joined the party. An extreme example is U.S. Steel, which surprised everyone this year by more than doubling its earnings, even without large nonrecurring gains, through the first nine months. Chairman David M. Roderick says, "All segments were profitable in the third quarter, although chemicals' results continued to be severely impacted by depressed market conditions." In other words, the company relied largely on its namesake product for recovery.

Another case is Esmark, whose appreciation on Wall Street has grown mightily this year on an 89% earnings gain through three quarters following a radical restructuring. Of its chemicals, Esmark says quietly that earnings decreased slightly in the third quarter while revenues increased 16%.

Then there's National Distillers, whose net income from continuing operations rose 63% in the third quarter from a year ago with no help from its important chemical line. Operating profits at its U.S.I. Chemicals subsidiary were down from 1980. Distillers chairman Drummond C. Bell comments that physical sales volume of major petrochemical products fell from recessionary 1980. These products include polyethylene, ethanol, and vinyl acetate. Increases in selling prices generally were not sufficient to offset cost increases. Another problem for U.S.I. is its joint syngas-fed complex with Du Pont outside Houston. Distillers say that it was not even in operation for a large part of the third quarter.

Overall, few chemical operations at diversified producers gave earnings any more of a push than chemicals gave basic companies in the third quarter. The result was a sluggish chemical quarter, even though parent company results ran over a huge spectrum. Year-to-year comparisons went from a 500% gain in profits at much-improved Uniroyal to a 75% collapse at Kaiser Aluminum.

For the whole 30-company group,

NINE-MONTHS 1981			STOCK MARKET DATA							
Change from 1980	Profit margin[a]		Earnings per share		Stock price			Price-earnings ratio	Annual indicated dividend	Dividend yield, % of price
Earnings	1981	1980	Oct. 30	Recent 12 months	Oct. 30	Recent 12 months High	Recent 12 months Low	Oct. 30		
9%	6.1%	6.1%	$1.78	$7.07	54 1/4	69 7/8	51 1/8	8	$3.20	5.9%
106	5.4	3.1	1.98	8.25	28	35 1/4	21 1/4	3	2.00	7.1
3	3.9	4.1	1.48	7.16	48 3/4	52 1/8	39 3/4	7	3.40	7.0
16	11.9	11.3	2.07	7.89	65 1/2	85 3/8	60 5/8	8	3.00	4.6
−2	2.2	2.4	0.53	3.15	17 7/8	20 1/4	15	6	1.30	7.3
−20	8.2	11.0	1.06	4.92	49 5/8	65	48	10	3.00	6.0
−23	3.3	4.8	0.29	1.88	18 1/2	32 3/8	17 3/4	10	1.20	6.5
−25	6.5	8.8	0.95	4.73	24 1/8	37 1/2	22 3/4	5	1.80	7.5
3	3.5	3.3	1.47	4.91	28	30	23 7/8	6	2.05	7.3
90	7.0	4.9	2.35	7.98	60 1/2	61 3/4	32 3/4	8	2.68	4.4
89	4.1	2.5	1.80	5.67	52 1/2	55 1/2	24	9	1.84	3.5
5	4.3	4.3	0.87	4.10	25 7/8	35 3/4	24	6	1.60	6.2
12	6.6	7.6	1.62	5.47	36 5/8	51 1/8	28 3/8	7	1.92	5.2
4	8.2	8.6	0.78	3.51	45 1/2	54 7/8	40	13	1.60	3.5
−27	5.9	7.7	0.28	4.34	16 1/4	27 1/2	15 3/8	4	1.40	8.6
86	11.0	7.7	1.27	4.00	43 3/4	48 5/8	30 1/2	11	1.00	2.3
−5	14.1	15.9	1.16	5.38	79 7/8	103	73 1/8	15	2.60	3.3
35	5.8	4.5	2.00	7.30	48 3/8	53 7/8	37 1/4	7	2.80	5.8
975	2.6	0.3	1.28	3.31	25 1/2	29 1/2	17 1/2	8	1.50	5.9
8	13.6	13.6	1.04	4.76	52 3/4	68 3/4	45 1/4	11	2.30	4.4
−12	2.5	3.0	0.84	1.57	18	33 3/4	17 1/4	11	1.40	7.8
d	2.3	d	0.27	1.49	8 5/8	10 3/8	4 3/8	6	0	0
5	3.2	2.1	0.66	na	20 7/8	30 3/4	17	na	0.56	2.7
37	6.5	4.8	0.85	3.99	23 7/8	32 7/8	22	6	2.20	9.2
−9	8.6	10.4	1.03	5.27	49	69	45 5/8	9	2.00	4.1
−20	3.2	3.9	1.57	4.55	29 5/8	37 1/2	26 1/8	7	2.40	8.1
24	10.5	8.9	2.08	7.08	49 3/4	56	39 3/4	7	2.20	4.4
26	13.0	13.1	0.63	2.44	27 7/8	38	25	11	0.60	2.2
−81	0.4	2.4	−0.41	−0.22	14 1/4	16 3/8	9 1/4	d	0.80	5.6
−40	2.3	4.1	0.37	2.68	27	31 1/2	20	10	1.20	4.4

earnings went up at 19 and down at 11. Profit margins improved over recession-bound third-quarter 1980 for just 16. That indicates a substantial profit-margin problem still unsolved from last year for many companies.

For the 20 major chemical-producing oil and natural gas companies in C&EN's survey, corporate earnings have turned for the worse after surviving last year's recession in good shape. Most notably, earnings fell in the third quarter at all of the top four oil companies—Exxon, Mobil, Texaco, and Standard Oil of California. For all 20, earnings fell at nine and rose at 11. Profit margins fell for 13. For the moment, the bloom is off petroleum profits, although the exploration business continues at a furious pace, aiding earnings at big suppliers such as U.S. Steel, NL Industries, and Big Three Industries. U.S. Steel's role here comes through producing shortage-plagued drilling pipe.

For the balance of the year, chemical companies are generally none too confident. At American Cyanamid, chairman and chief executive officer James G. Affleck says that slack demand and dramatically lower prices for fertilizers plus the strengthening of the U.S. dollar against foreign currencies will continue to have an unfavorable impact for some months to come.

Alexander F. Giacco, chairman of Hercules, says, "We do see signs of weakening in most of our business areas as customers hesitate to build inventories. It would appear that the economy may well be flat over the next few months until the current uncertainties are resolved.

Ethyl chairman F. D. Gottwald Jr. states that "even with improved third-quarter net income, we still do not have confidence that the fourth-quarter results will be as good as last year's record fourth quarter."

And at Mallinckrodt, president Raymond F. Bentele says, "The company's performance was encouraging in the slow economy which characterized the third quarter. We anticipate that profits in the fourth quarter will continue to reflect increasing weakness in the domestic economy, a further softening of economies abroad, and a strong U.S. dollar." Bentele does think, in spite of this, that with a nine-month earnings gain of 12% safely under its belt, "Mallinckrodt's profits and sales for the full year of 1981 will exceed the 1980 results." □

Canadian chemicals continue in doldrums

Combined earnings for four largest companies in third quarter were lower than comparable period a year ago for fifth consecutive quarter

As third-quarter earnings figures come rolling in from Canadian chemical companies, it is becoming painfully obvious that the Canadian chemical industry is hurting.

Among the major publicly reporting companies, the results are disturbingly similar. C-I-L Inc. reports sales up during this year's third quarter compared to the third quarter of 1980. But earnings are down.

For Celanese Canada, the story is the same: sales up, earnings down. Union Carbide of Canada's sales are up, but earnings are way down. Only Du Pont Canada among the four major chemical companies was able to register increased earnings on increased sales, but that was only 1.4%.

A feel for how the industry as a whole is doing in Canada can be obtained by taking a look at the combined sales and earnings figures for these four companies. In this year's third quarter, combined sales for the four were up 14.5% over the third quarter of 1980 (although they were down 16.6% from the second quarter of this year).

The bite comes in net (after-tax) income. The four-company total for the third quarter of 1981 is down a hefty 35% from last year's similar period and a resounding 51% from this year's second quarter.

To make matters worse, this is the fifth consecutive quarter that the combined earnings of these four companies were lower than the earnings in the comparable period of the previous year.

Something, obviously, is wrong.

What's wrong is that Canadian chemical companies are caught in the classic cost-price squeeze. Raw-material costs are rising rapidly, particularly of oil and gas-based feedstocks that have been affected by Canada's national energy policies.

Meanwhile, a stagnant economy at home and stiff competition in the industry's all important export markets have put an effective lid on prices. Surplus capacity and rising labor costs haven't helped any.

The inevitable result: lower profits despite increased sales.

The results of Union Carbide of Canada are fairly typical. In this year's third quarter, it recorded a 10.9% increase in sales, but suffered a 63% drop in net income.

Company chairman John S. Dewar says that the company did better in the gases, metals, and carbon segments of its business. The major earnings shortfall came in chemicals and plastics. Dewar notes that in Canada the cost of ethylene, which is the company's largest single cost factor in petrochemical production, escalated almost one third this year, primarily as a result of government policies. Meanwhile, he says, ethylene costs remained relatively stable in the U.S. and dropped in Europe and Japan.

Carbide's export sales rose 33% during the first nine months of 1981, but domestic shipments chalked up only a 7% gain. For these nine months, Carbide's net income is down 45%. The basic reason: Although sales volume is up 12%, prices have declined 2%.

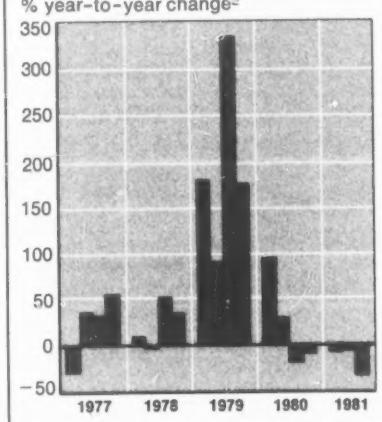
Third-quarter earnings of Celanese Canada were hit hard by a work stoppage at its Sorel carpet plant and the subsequent sale of the carpets division to St. Georges International. The carpets division had a net loss of $3.7 million during the third quarter of 1981, including what the company lost in selling the division. The division had been losing money for several years.

Du Pont, the only one of the four Canadian chemical majors to chalk up an increase in net income during the third quarter, owes that achievement to improved fibers sales. During the first nine months, in fact, earnings of the chemicals group improved only moderately while the plastics and films group reported sharply lower earnings. The reasons are weak markets, strong price competition, and rising raw material costs.

Du Pont president James E. Newall doesn't expect much improvement in demand for his company's products over the near term. That may well describe the outlook for the entire Canadian chemical industry.

Earl Anderson, New York

Combined earnings plummet in third quarter



a After-tax earnings of four largest publicly reporting Canadian chemical companies—Celanese Canada, C-I-L, Du Pont of Canada, and Union Carbide of Canada.

Sales are up, but earnings suffer

	NINE-MONTHS 1981					
$ Millions (Canadian)	Net sales	Change from 1980	Net income	Change from 1980	Profit margin[a] 1981	1980
C-I-L Inc.	$ 882.3	18.9%	$ 45.1	10.0%	5.1%	5.5%
Celanese Canada	275.9	10.6	13.3	−5.7	4.8	4.9
Du Pont Canada	871.8	21.7	35.6	6.9	4.1	4.6
Union Carbide of Canada	622.9	9.8	33.5	−45.3	5.4	10.8
TOTAL	$2652.9	16.6%	$127.5	−14.8%	4.8%	6.5%

a Net income as percentage of sales.

Shifts ahead for trade in ethylene derivatives

By 1990, the global trade pattern of ethylene derivatives will look much different from today's. Countries and geographic regions that are now net exporters will have shifted to being net importers, and vice versa.

This is the projection of Jan T. Quant, general manager of base chemicals at Shell International Chemical Co., in London. His views, encouraging to some, must be disquieting to others who heard his talk at last month's meeting of the European Petrochemical Association in Venice.

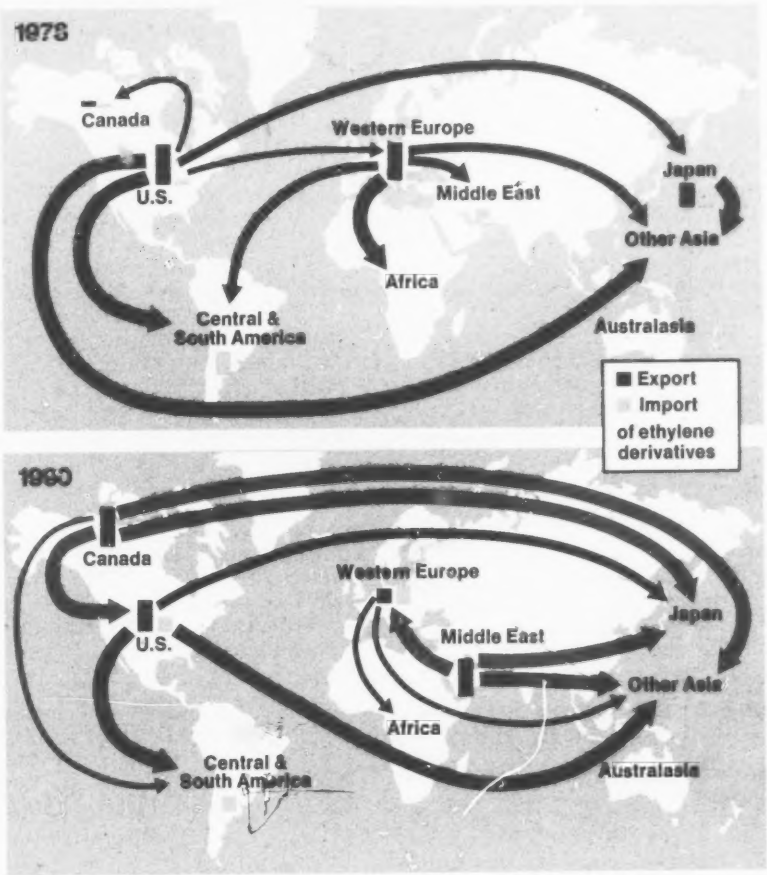
The reason for the shift will be the establishment of ethylene production in areas where there are plentiful supplies of natural gas at favorable prices. These are predominantly Canada and Middle East countries.

Japan might be most severely affected. From being a net exporter of some 700,000 metric tons of chemicals (in terms of ethylene content) in 1978, Quant foresees Japan being a net importer of 1 million metric tons in 1990. "Although all ethylene derivatives are to some extent affected by the emergence of new producers, it is low-density polyethylene, ethylene glycol, and possibly ethylene dichloride which exert the major influence in the trade patterns," Quant observes. For instance, Japan exported 300,000 metric tons of LDPE, and 200,000 metric tons of glycol (in terms of ethylene content) in 1978. By 1990, the situation will have been fully reversed.

Western Europe as a whole, too, will move into a net import position during this decade. In 1990, Quant expects the region to be a net importer of some 100,000 metric tons of LDPE (ethylene equivalent), in contrast to the 500,000 metric tons of net exports in 1978. For ethylene glycol, the anticipated 1990 net import volume will be 300,000 metric tons of ethylene content, against net exports of 100,000 metric tons in 1978.

The U.S. overall will remain a net exporter of ethylene-derived chemicals for the remainder of this decade. But Quant believes that the volume of these chemicals will be just about halved from 900,000 metric tons (ethylene equivalent) in 1978 to 500,000 metric tons in 1990. U.S. imports and exports of LDPE will be in balance in that year, compared to the 300,000-metric-ton (of ethylene equivalent) excess of exports over imports in 1978. Ethylene glycol will

Canada and the Middle East will emerge strongly as exporters of ethylene derivatives



Source: Shell

Olefins derivatives growth higher outside industrial countries

Millions of metric tons per year	Ethylene derivatives 1978	1990	% annual change	Propylene derivatives 1978	1990	% annual change
Western Europe						
Consumption	9.8	13.3	2.6%	5.3	7.6	3.0%
Net exports/(imports)	1.2	(0.1)		0.5	0.5	
Production	11.0	13.2	1.6	5.8	8.1	2.8
North America						
Consumption	11.6	16.3	2.9	5.9	8.8	3.4
Net exports/(imports)	0.9	1.6		0.3	0.6	
Production	12.5	17.9	3.0	6.2	9.4	3.5
Japan						
Consumption	3.7	6.5	4.8	2.1	3.2	3.6
Net exports/(imports)	0.7	(1.0)		0.4	0.1	
Production	4.4	5.5	1.9	2.5	3.3	2.4
Other noncommunist countries						
Consumption	4.5	10.9	7.6	1.6	4.3	8.6
Net exports/(imports)	(2.6)	(0.7)		(0.9)	(1.1)	
Production	1.9	10.2	15.0	0.7	3.2	13.5
TOTAL	29.8	46.8	3.8%	15.2	24.0	3.9%

Source: Shell

move from an export-import balance in 1978 to net imports amounting to some 100,000 metric tons of ethylene equivalent in 1990.

Quant makes the point that the new producers of ethylene and its derivatives won't affect propylene trade. The reason, of course, is that cracking of ethane doesn't result in anything like the amount of coproduct propylene that cracking naphtha or gas oil does. Western Europe and the U.S., and to a lesser extent Japan, will continue as net exporters of propylene chemicals to world markets, with 1990 levels about the same as they were in 1978.

"For existing ethylene plants around the world, there is unlikely to be a change in feedstock leading to a significant change in product mix," Quant believes. "The West European industry is based predominantly on naphtha and gas oil, with a limited ability to crack butane and propane. There does not appear any good reason except that naphtha and gas oil will not be available as before."

Turning to liquefied petroleum gas, Quant holds the view that "LPG will not become an attractively priced alternative feedstock for ethylene production except in a few special cases. The 10 million metric tons or so currently consumed annually in the petrochemical industry, mainly in the U.S., is unlikely to grow to any significant extent."

Of the nearly 30 cracker projects that various companies around the world have mentioned as having in mind, Quant believes that only eight will materialize between 1985 and 1990. All will be ethane-based. Combined, they will have an annual ethylene capacity of some 4 million metric tons. That will be less than 10% of the projected 47 million metric-ton ethylene demand throughout the noncommunist world by 1990.

"Although in percentage terms this may seem relatively insignificant, its impact on product movements will be considerable," Quant warns. "For the European market for ethylene derivatives, Saudi Arabia will have a substantial cost advantage, even after transport costs are taken into account. In the Far East, Canada seems well set to displace Japanese and other producers from their traditional export markets." □

European petrochemical industry faces pitfalls

A number of pitfalls lie ahead of West European petrochemical investment strategies. "Prospects for the industry are poor unless some remedial action can be initiated in the near future," Shell's Anthony Lowe warned attendees at the European Chemical Market Research Association meeting in Cannes, France.

Lowe, who heads chemical planning and economics at Shell International Chemical Co. in London, outlined some of these pitfalls at about the time his colleague Jan Quant was addressing his audience in Venice (see previous story). He makes the point that "Europe in general, in its inability to arrive at a societal consensus, is fundamentally different from the U.S. and Japan.

"This difference, between Europe on the one hand and the U.S. and Japan on the other, is something which, in my view, the macroeconomists in their great forecasting institutions fail to take account of," he says. But although he detailed the

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